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EXAMINER

ZHEN, LI B

ART UNIT

PAPER NUMBER

2194

MAIL DATE

DELIVERY MODE

10/16/2009

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 09/700,093	<b>Applicant(s)</b> HIRSCH ET AL.	
	<b>Examiner</b> LI B. ZHEN	<b>Art Unit</b> 2194	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 13 July 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 2-34 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 2-34 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>4/28/2009</u> .   | 6) <input type="checkbox"/> Other: _____                          |

**DETAILED ACTION**

1. Claims 2 – 34 are pending in the application.

***Response to Arguments***

2. Applicant's arguments with respect to the claims have been considered but are moot in view of the new ground(s) of rejection.

***Information Disclosure Statement***

3. The information disclosure statement filed 4/28/2009 fails to comply with 37 CFR 1.98(a)(3) because it does not include a concise explanation of the relevance, as it is presently understood by the individual designated in 37 CFR 1.56(c) most knowledgeable about the content of the information, of each patent listed that is not in the English language. It has been placed in the application file, but the information referred to therein has not been considered. Specifically, reference BE is not in the English Language and a concise explanation of the relevance of the reference.

***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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**5. Claims 17, 30 and 31 – 33 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,903,568 to Tanaka et al. [hereinafter Tanaka, previously cited] in view of WO 96/20547 [hereinafter Carretta].**

6. As to claim 17, Tanaka teaches a communication system for processing state information [event notification; col. 7, lines 3 – 11] in a management network having a number of management levels [multilayer management system; col. 6, lines 22 – 50], comprising:

an agent at a first management level storing state information associated therewith [lower-layer agent 107 gives an event notification  $N_{n-1}$  produced in the managed object  $M_{n-1}$ ; col. 10, lines 38 - 48];

a manager at a second management level above the first management level [upper-layer manager 101; col. 6, lines 22 – 50], sending a request message for performing state realignment to the agent [a lower-layer manager 106 for performing a service function in response to a request from the upper-layer manager 101, a plurality of lower-layer agents 107 for performing a service function in response to a request from the lower-layer manager 106; col. 6, lines 22 – 50 and col. 7, lines 3 – 11], the agent checking the state information with regard to deviations from a normal state [lower-layer agent 107 gives an event notification  $N_{n-1}$  produced in the managed object  $M_{n-1}$  to the lower-layer manager 106 in a step 401; col. 10, lines 45 - 48], and sending deviant state information of the agent indicating the deviations to the manager in response to the request message [Event notifications which correspond to

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the upper layer in the managed-object correspondence information database 105 are reported to the upper-layer agent 102 in a step 406; col. 10, line 48 – col. 11, line 18]. Although Tanaka teaches sending deviant state information of the agent, Tanaka does not specifically disclose sending only deviant state information of the agent indicating the deviations from the normal state to the manager in response to the request message.

However, Carretta teaches a communication system for state realignment of state information in a management network [realignment; p. 6, lines 2 – 5; p. 8, line 36 – p. 9, line 3; p. 11, lines 1 – 16; p. 36, line 28 – p. 37, line 34] in a management network having a number of management levels [p. 1, lines 10 – 20 and p. 19, line 14 – p. 20, line 2], a manager sending a request message for performing state realignment to the agent [MANAGER module acts as a MANAGER which sends directives to AGENTS. In this case the directives consist of requesting an event report service or a recorded events report recovery service; p. 7, lines 26 – 36] after communication between said manager and said agent is established initially [state information is reported not only in the management system initialization step but immediately after each loss of alignment of the state information; p. 12, lines 10 – 13; p. 26, lines 6 – 14] or following a period during which communication was not guaranteed [ALIGNMENT RECOVERY, p. 7, lines 24 – 36; p. 11, lines 1 – 16; p. 36, line 28 – p. 37, line 34], an agent checking the state information of said agent with regard to deviations and [each value  $VMBF(i)$  is compared with a corresponding value  $DF(i)$ , termed default, present in a default value memory  $DF$ , filled with said values during initialization, or with conventional values

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agreed by AGENT and MANAGER...the process reaches A8 only if in step A7 the value VMBF(i) is different from the corresponding default value DF(i); p. 37, lines 10 – 22; p. 11, lines 17 – 23] sending only deviant state information of the agent indicating the deviations from the normal state to the manager in response to the request message [sending of only the variable state values different from default is a sending procedure which allows economizing the state information to be sent to a MANAGER; p. 37, lines 34 – 36 and p. 38, line 32 – p. 39, line 6].

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify the invention of Tanaka to incorporate the features of Carretta because this allows economizing the state information to be sent to a MANAGER so that the latter can recover its own alignment and the economy is very advantageous when the state of the managed subsystem is defined by a large number of variables [p. 37, line 35 – p. 38, line 2 of Carretta].

7. As to claim 30, Tanaka as modified teaches a method for processing state information [event notification; col. 7, lines 3 – 11 of Tanaka; and p. 6, lines 2 – 5; p. 8, line 36 – p. 9, line 3; p. 11, lines 1 – 16; p. 36, line 28 – p. 37, line 34 of Carretta] in a communication system by way of a management network having a number of management levels [multilayer management system; col. 6, lines 22 – 50 of Tanaka and p. 1, lines 10 – 20 and p. 19, line 14 – p. 20, line 2 of Carretta], comprising:

storing, at an agent of a first management level, state information associated with the agent [lower-layer agent 107 gives an event notification N.sub.n-1 1 produced in the managed object M.sub.n-1 1; col. 10, lines 38 - 48 of Tanaka];

sending, to the agent from a manager at a second management level [upper-layer manager 101; col. 6, lines 22 – 50 of Tanaka] above the first management level, a request message for performing state realignment [a lower-layer manager 106 for performing a service function in response to a request from the upper-layer manager 101, a plurality of lower-layer agents 107 for performing a service function in response to a request from the lower-layer manager 106; col. 6, lines 22 – 50 of Tanaka and col. 7, lines 3 – 11 of Tanaka and p. 7, lines 26 – 36 of Carretta] after communication between said manager and said agent is established initially [state information is reported not only in the management system initialization step but immediately after each loss of alignment of the state information; p. 12, lines 10 – 13; p. 26, lines 6 – 14 of Carretta] or following a period during which communication was not guaranteed [ALIGNMENT RECOVERY, p. 7, lines 24 – 36; p. 11, lines 1 – 16; p. 36, line 28 – p. 37, line 34 of Carretta];

comparing by the agent, the state information previously stored by the agent for deviation from a normal state [lower-layer agent 107 gives an event notification N.sub.n-1 1 produced in the managed object M.sub.n-1 1 to the lower-layer manager 106 in a step 401; col. 10, lines 45 - 48 of Tanaka and p. 9, lines 26 – 36 of Carretta]; and

sending, by the agent to the manager in response to the request message, only deviant state information indicating deviation from the normal state of the state

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information previously stored by the agent [p. 37, lines 10 – 22; p. 11, lines 17 – 23 and p. 37, lines 34 – 36 and p. 38, line 32 – p. 39, line 6 of Carretta].

8. As to claim 31, Tanaka as modified teaches a communication system [multilayer management system; col. 6, lines 22 – 50 of Tanaka and p. 1, lines 10 – 20 and p. 19, line 14 – p. 20, line 2 of Carretta] comprising:

an agent of a first management level that stores a state information associated with the agent [lower-layer agent 107 gives an event notification  $N_{sub.n-1}$  1 produced in the managed object  $M_{sub.n-1}$  1; col. 10, lines 38 - 48 of Tanaka and p. 9, lines 26 – 36 of Carretta];

a manager at a second management level [upper-layer manager 101; col. 6, lines 22 – 50 of Tanaka] that sends a request message for performing state realignment to the agent [a lower-layer manager 106 for performing a service function in response to a request from the upper-layer manager 101, a plurality of lower-layer agents 107 for performing a service function in response to a request from the lower-layer manager 106; col. 6, lines 22 – 50 of Tanaka and col. 7, lines 3 – 11 of Tanaka and p. 7, lines 26 – 36 of Carretta] after communication between said manager and said agent is established initially [state information is reported not only in the management system initialization step but immediately after each loss of alignment of the state information; p. 12, lines 10 – 13; p. 26, lines 6 – 14 of Carretta] or following a period during which communication was not guaranteed [ALIGNMENT RECOVERY, p. 7, lines 24 – 36; p. 11, lines 1 – 16; p. 36, line 28 – p. 37, line 34 of Carretta];



wherein the agent compares the state information previously stored by the agent for deviation from a normal state [lower-layer agent 107 gives an event notification N.sub.n-1 1 produced in the managed object M.sub.n-1 1 to the lower-layer manager 106 in a step 401; col. 10, lines 45 - 48 of Tanaka] and sends deviant state information of the agent indicating the deviations from the normal state to the manager only in response to the request [p. 37, lines 10 – 22; p. 11, lines 17 – 23 and p. 37, lines 34 – 36 and p. 38, line 32 – p. 39, line 6 of Carretta].

9. As to claim 32, Tanaka as modified teaches the state information is a state of a resource [p. 17, lines 28 – 35 of Carretta].

10. As to claim 33, Tanaka as modified teaches the state includes representation of at least one of operational readiness [operational state; p. 17, lines 28 – 35 of Carretta], manageability, and use of the resource in the communication system [p. 2, lines 10 – 22 of Carretta].

11. **Claims 2 – 16, 18 – 29 and 34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tanaka and Carretta further in view of U.S. Patent No. 6,404,743 to Meandzija [previously cited].**

12. As to claim 2, Tanaka as modified does not specifically teach an administrative state.

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However, Meandzija teaches utilizing state attributes selected from the group consisting of an operational state [operational state], an administrative state [an event forwarding discrimination group, which includes an administrative state, an operational state; column 11, lines 38 – 45] and a usage state [usage state 420; column 12, lines 29 – 36] as state information.

It would have been obvious to a person of ordinary skill in the art at the time of the invention to apply the teaching of utilizing administrative state as state information as taught by Meandzija to the invention of Tanaka and Carretta because administrative state can be set by a manager and used to administratively prohibit an agent from use and in conjunction with a community string, the administrative state can be used for concurrency control [col. 12, lines 8 – 12 of Meandzija].

13. As to claim 3, Tanaka as modified teaches the normal state is defined by values for the state attributes [state values and state transitions are as defined in the ITU-T X.731 standard; column 11, line 65 – column 13, line 33 of Meandzija] selected from the group consisting of an operational state, an administrative state, a usage state, an unknown state, an alarm status [value defined for the alarm status in the X.731 standard is a set of enumerated values; column 12, lines 54 – 65 of Meandzija], and an available status [value defined for the availability status in the X.731 standard is a set of enumerated values; column 12, line 65 – column 13, line 9 of Meandzija].

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14. As to claim 4, Tanaka as modified teaches utilizing state attributes for characterizing an operational readiness [operational state 415 describes the operational state of the unit represented by the agent/subagent; column 12, lines 13 – 28 of Meandzija], manageability [administrative state 410 describes the administrative state of the unit represented by the agent/subagent; column 11, line 65 – column 12, line 2 of Meandzija] and use of a resource [availability status 435 describes-the availability status of the unit represented by the agent/subagent; column 12, line 65 – column 13, line 9 of Meandzija] supported by the agent in the communication system as state information.

15. As to claim 5, Tanaka as modified teaches utilizing status attributes, which specify for a resource supported by the agent in the communication system whether it is in an unknown state [unknown status describes the unknown status of the unit represented by the agent/subagent; column 13, lines 27 – 34 of Meandzija], in an alarmed state [alarm status 430 describes the alarm status of the unit represented by the agent/subagent; column 12, lines 54 – 65 of Meandzija] or in a state of availability [availability status 435 describes-the availability status of the unit represented by the agent/subagent; column 12, line 65 – column 13, line 9 of Meandzija], as state information.

16. As to claim 6, Tanaka as modified teaches sending by the manager in the request message a correlation information item for a correlation of the respective request with messages containing changed state information received by the agent

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[Event Forwarding Discriminator (EFD) Group 530 comprises EFD configuration information defining what types of events an EFD will transform into notifications, at what times of day it will do so, and to which managers it will send the notifications to; column 13, lines 48 – 55 of Meandzija].

17. As to claim 7, Tanaka as modified teaches sending by the agent in a message for starting the state realignment, a correlation information item for correlating the messages containing changed state information subsequently sent with the state realignment started in each case [once the agent generates an event as specified in the Event table 515, it checks an EFD Table 535 to find an EFD that matches that event and specifies what kind of notification is to be generated, and to which manager that notification is to be sent; column 14, lines 8 – 15 of Meandzija].

18. As to claim 8, Tanaka as modified teaches sending the correlation information generated by the agent in the message or messages containing the changed state information [generating the event at the agent and communicating a notification regarding the event from the agent to the management station via the network; column 4, lines 55 – 65 of Meandzija].

19. As to claim 9, Tanaka as modified teaches sending by the manager a parameter to the agent and controlling the state realignment in dependence on the parameter [event information also defines EFD information that defines pre-conditions for

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communicating a notification of an event from the agent 230 to the management station 210 via the network 160; column 10, lines 57 – 67 of Meandzija].

20. As to claim 10, Tanaka as modified teaches sending by the manager a parameter and automatically initiating the state realignment [automatic schedule] by the agent utilizing the parameter [the agent may have an automatic schedule which defines time periods in which a notification may be provided for certain events; column 6, lines 13 – 21 of Meandzija].

21. As to claims 11 and 12, Tanaka as modified teaches providing a parameter by the manager with a parameter value which specifies a starting time [start time] and end time [stop time] for the automatic state realignment [scheduling function 540 includes specifications of a daily start and stop time and a weekly mask specifying when the EFD changes availability status from off-duty to available; column 14, lines 16 – 33 of Meandzija].

22. As to claim 13, Tanaka as modified teaches providing by the manager a parameter with a parameter value which specifies a time interval [time periods] for a repetition of the automatic state realignment [the agent may have an automatic schedule which defines time periods in which a notification may be provided for certain events; column 6, lines 13 – 21 of Meandzija].

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23. As to claim 14, Tanaka as modified teaches providing by the manager a parameter with a parameter value which characterizes resources for which changed state information [specifies what type of notification] must be transmitted by the agent [Each EFD specifies what type of notification is to be sent for an event that has occurred in the agent; column 13, lines 55 – 67 of Meandzija].

24. As to claim 15, Tanaka as modified teaches providing, by the manager, a parameter [control status] with a parameter value that permits interruption [suspended] of a running state realignment [control status describes the control status of the unit represented by the agent/subagent with the possible values of subjectToTest, partLocked, reservedToTest, suspended, and free; column 13, lines 8 – 19 of Meandzija].

25. As to claim 16, Tanaka as modified teaches sending, by the manager, the parameter to the agent in the request message [events processing module 224 is used to provide event information that is communicated to the agent to define pre-conditions for the agent to generate an event; column 10, lines 57 – 67 of Meandzija].

26. As to claim 24, Tanaka as modified teaches utilizing state attributes selected from the group consisting of an unknown state [unknown status describes the unknown status of the unit represented by the agent/subagent; column 13, lines 27 – 34 of Meandzija], an alarm status [alarm status 430 describes the alarm status of the unit

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represented by the agent/subagent; column 12, lines 54 – 65 of Meandzija], and an available status [availability status 435 describes-the availability status of the unit represented by the agent/subagent; column 12, line 65 – column 13, line 9 of Meandzija] as state information.

27. As to claims 18 – 23 and 29, these are system claims that correspond to method claims 2 – 5, 9, 10 and 24; note the rejection to claims 2 – 5, 9, 10 and 24 above, which also meets these system claims.

28. As to claims 25 – 28, these are rejected for the same reasons as claim 19 and 14 – 16 above.

29. As to claim 34, Tanaka as modified teaches the state [col. 12, lines 12 – 29 of Meandzija] is defined by a telecommunications industry standard [col. 11, lines 65 – col. 12, line 12 of Meandzija].

### ***Conclusion***

30. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

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A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

#### **CONTACT INFORMATION**

31. Any inquiry concerning this communication or earlier communications from the examiner should be directed to LI B. ZHEN whose telephone number is (571)272-3768. The examiner can normally be reached on Mon - Fri, 8:30am - 5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hyung Sub Sough can be reached on 571-272-6799. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.



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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Li B. Zhen/  
Primary Examiner, Art Unit 2194